

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A mobile router device, to which at least one terminal device attaches, connects a backbone network, having a plurality of access routers, to a mobile network at a first location via a first access router of the plurality of access routers, the mobile network moving within the backbone network by moving to a second location and connecting to a second access router of the plurality of access routers, the mobile router device comprising:

a means for determining whether or not the mobile router device works as a master router that can connect the mobile network to the backbone network;

a means for recording a virtual address common to ~~respective~~ the mobile router devices device attaching to the mobile network at the first location and the second location, and producing a care of address with respect to the virtual address and usable by the mobile router device per se at the second location ~~a location to which the router device moves~~; and

a means for generating and transmitting a binding update message which makes the virtual address corresponding to the care of address when the mobile router device works as the master router,

wherein,

the mobile network further includes a backup router device, and

if the backup router device determines the connection to the backbone network is lost between the mobile router device and the first access router, the backup router device transmits another binding update message that includes the virtual address corresponding to the mobile router device and another care of address corresponding to the backup router device.

2. (Original) The mobile router device of claim 1, wherein the virtual address is used as a real address assigned to any one of the respective mobile router devices attaching to the mobile network.

3. (Original) The mobile router device of claim 1 further comprising:

a means for monitoring quality of a link connected to the backbone network;

a means for changing a priority which determines the master router and a backup router in response to the quality of the link; and

a means for determining whether or not the mobile router device per se works as the master router in response to the priority.

4. (Original) The mobile router device of claim 1 further comprising a means for storing a sequence number of the binding update message into a master router advertisement packet and for transmitting the packet when the mobile router device works as the master router.

5. (Original) The mobile router device of claim 4, wherein the master router advertisement packet uses a virtual router advertisement in accordance with a virtual router redundancy protocol.

6. (Original) The mobile router device of claim 4, wherein the master router advertisement packet uses IPv6 router advertisement message.

7. (Original) The mobile router device of claim 1 further comprising:

a means for receiving a master router advertisement packet which is transmitted by another mobile router device and notifies the mobile router device of the another mobile router device working as the master router; and

a means for recording a sequence number of the binding update message contained in the master router advertisement packet received in order to use the sequence number for a case when the mobile router device per se becomes the master router,

when the mobile router device works as a backup router.

8. (Original) The mobile router device of claim 7, wherein the master router advertisement packet uses a virtual router advertisement in accordance with a virtual router redundancy protocol.

9. (Original) The mobile router device of claim 7, wherein the master router advertisement packet uses IPv6 router advertisement message.

10. (Original) A mobile network system comprising:

a plurality of the mobile router devices as defined in claim 1;

at least one terminal device attaching to the mobile router devices; and

a home agent device for managing movements of the mobile router devices.

11. (Original) The mobile network system of claim 10, wherein at least one of the mobile router devices has a physical interface to a backbone network, a type of which interface is a different from those of other mobile router devices.

12. (Original) The mobile network system of claim 10, wherein each one of the mobile router devices uses a virtual address common to the others at a side to a backbone network and implements a virtual router redundancy protocol at a side to a mobile network, wherein when one of the mobile router devices works as a master router, the master router uses the common virtual address for communication.

13. (Original) The mobile network system of claim 12, wherein one of the mobile router device working as the master router uses the common virtual address and a care of address generated corresponding to the common virtual address for transmitting a binding update message to be used for a mobility management to the home agent device.

14. (Currently Amended) A ~~mobility management method of a mobile router device~~ attaching to a mobile network system, ~~which the~~ system comprising:

at least one terminal device;

a mobile network including a plurality of mobile router devices, to which the terminal device attaches, for coupling the mobile network to a backbone network, the plurality of mobile router devices including a master router device and a backup router device; and

a home agent device for associating a home address with a care of address and managing both of the addresses,

wherein,

~~when the mobile network moves from being~~is connected to a home network at a first location within the backbone network and when to a second location within the backbone network,

~~one of the mobile router devices working as a~~when the master router device at the first location is~~continues~~ to still work as the master router after ~~a movement~~the mobile network moves to the second location, the management method associates a care of address corresponding to a virtual address generated after the movement to the second location with the virtual address and registers the care of address with the home agent device, ~~or and when one of the mobile router devices working as a backup router is to become the master router after the movement, the managing method associates the care of address corresponding to the virtual address generated after the movement with the virtual address and registers the care of address with the home agent device, and~~

if the backup router device determines the connection to the backbone network is lost between the master router device and the backbone network, the backup router device transmits a binding update message that includes the virtual address corresponding to the master router device and another care of address corresponding to the backup router device.

15. (Currently Amended) The ~~mobility management method~~mobile router device as defined in claim 14, wherein the virtual address is any one of physical addresses to be used in physical interfaces, to the backbone network, when each one of the mobile router devices attaching to the mobile network is connected to the home network.

16. (Currently Amended) The ~~mobility management method~~mobile router device as defined in claim 14, wherein ~~the method puts~~ the virtual address and a sequence number of a another binding update message to be transmitted to the home agent device ~~into device is~~

included in a master router advertisement packet to be transmitted to the mobile network for notifying the home agent device of the mobile router device being to work as the master router.

17. (Currently Amended) The ~~mobility management method~~mobile router device as defined in claim 16, wherein the master router advertisement packet is a virtual router advertisement packet to be used by a virtual router redundancy protocol implemented in the mobile router device at a side to the mobile network.

18. (Currently Amended) The ~~mobility management method~~mobile router device as defined in claim 16, wherein the master router advertisement packet includes IPv6 router advertisement message to be transmitted from the mobile router device working as the master router to a side of the mobile network of the mobile router device.